

# Tropical Storm Irene Bridge Replacement Summary

**Hancock ER STP 0174(17) VT 125, BR24** – The replacement structure was designed in Structures and was constructed and installed by the Operations Bridge Team and District forces. The road was scheduled to be closed at the culvert for one weekend (Friday 6:00 pm – Monday 6:00 am). The new precast concrete box culvert was installed without incident and the road was opened on Sunday November 20, 2011. The project was completed in December, 2011. Construction Costs = \$200,000.



**Warren ER STP 013-4(36) VT 100, BR165** – The replacement structure was designed by Dubois and King. The construction contract was signed on December 16<sup>th</sup>, 2011. The replacement structure is a precast Concrete rigid frame on precast concrete substructures. All elements of the bridge were cast off site. The structure was set into place in sections and tied together with a concrete closure pours. The project was completed in July, 2012. Construction Costs = \$950,000.



**Woodford ER BHF 010-1(44) VT9, BR11** –VT 9, BR 11 – The replacement structure was designed in Structures with help from Materials and Research. The construction contract was signed on May 10, 2012. Project included a new steel girder bridge span, supported on the existing pier and on a new abutment. Traffic was maintained on a two-way temporary bridge during construction. The project was completed on June 6, 2013. Construction Costs = \$2,100,000.



**Hubbardton ER STP 0161(26) VT30, BR96** – The replacement structure was designed by VHB. The construction contract was signed September 18, 2012. The road was scheduled to be closed for 16 days to install a precast concrete rigid frame on precast concrete substructures. The contractor opened the road in just under 14 days and received incentive pay for early completion. The project was completed on November 29, 2012. Construction costs = \$780,000.



**Hubbardton ER STP 0161(27) VT30, BR98** – The replacement structure was designed by VHB. The construction contract was signed September 18, 2012. The road was scheduled to be closed for 7 days to install the precast concrete box culvert. The contractor opened the road in just under 3 days and received incentive pay for early completion. The project was completed on November 29, 2012. Construction Costs = \$453,000.



**Hancock ER BR 0174(16) VT125, BR23** – The replacement structure was designed by Structures ABP Design Team with help from the Geotechnical section. The construction contract was signed on October 3, 2012. The superstructure and both abutments are precast concrete with all details being developed in structures. All elements of the bridge were cast off site. The structure was set into place in sections and tied together with concrete closure pours and post tensioning. Traffic was maintained on a two-way temporary bridge during construction. The bridge was opened to traffic on July 26, 2013. The project was completed on August 16, 2013. Construction Costs = \$1,600,000.





**Bennington ER BHF 010-1(45) VT9, BR9** – The Scour remediation was designed by CHA. The construction contract was signed on November 9, 2012. Both piers were severely undermined and needed to be reinforced and protected from future scour events. The project includes the installation of micro piles around the perimeter of each pier footing. The existing footings will be extended beyond the piles with dowels and cast in place concrete. The project is currently in construction and scheduled to be complete by December 6, 2013. Construction Costs = \$1,500,000.



**Jamaica ER BHF 015-1(25) VT30, BR40** – The scour remediation was designed by Stantec. The construction contract was signed on November 16, 2012. One abutment was severely undermined and needed to be reinforced and protected from future scour events. A combination of large stone fill and a precast concrete block scour wall will be constructed in front of the south abutment. The project is currently under construction and is scheduled to be complete by October 1, 2013. Construction Costs = \$540,000.



**Jamaica ER BRF 013-1(16) VT100, BR78** – The replacement structure was designed by Structures ABP Design Team and VHB with help from the Geotechnical section. The construction contract was signed on January 7, 2013. The superstructure is a concrete deck on steel girders. Abutments and a pier were cast in place (on driven H-piles) and are integral with the superstructure. Traffic continues to be maintained on a two-way temporary bridge that was installed immediately following TS Irene. The project is currently in construction and is scheduled to be complete by October 18, 2013. Construction Costs = \$2,800,000.



**Brighton ER STP 034-3(25) VT105, BR84** – The replacement structure was designed by Structures ABP Design Team with help from the Geotechnical section. The construction contract was signed on November 29, 2012. The superstructure and both abutments are precast concrete with all details being developed in structures. All elements of the bridge were cast off site. The structure was set into place in sections and tied together with a concrete closure pour and post tensioning. The contractor was given 21 days to remove the temporary bridge and construct the new structure under a road closure. The bridge was closed on July 8<sup>th</sup> and reopened to traffic on July 26<sup>th</sup>. The contractor received incentive pay for opening the bridge nearly 3 days early. The project was complete on August 14, 2013. Construction costs = \$1,100,000.



**Jamaica ER BRF 015-1(23) VT30, BR30** – The replacement structure was designed by Structures ABP Design Team with help from the Geotechnical section. The construction contract was signed on March 8, 2013. The superstructure is a concrete deck on curved steel girders. The abutments were cast in place atop steel H piles and are integral with the superstructure. The project involved extensive riverbank restoration and stabilization adjacent to the structure. This project also includes the replacement of a box culvert adjacent to the bridge. Traffic continues to be maintained on a two-way temporary bridge that was installed immediately following TS Irene. The project is currently in construction and is scheduled to be complete in December 12, 2013. Construction costs are \$2,800,000.

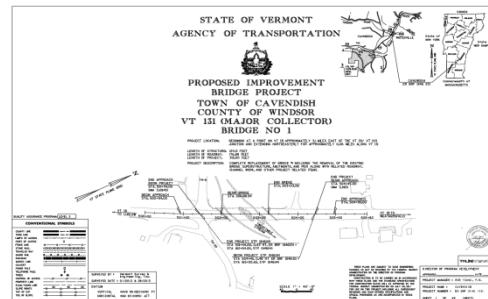




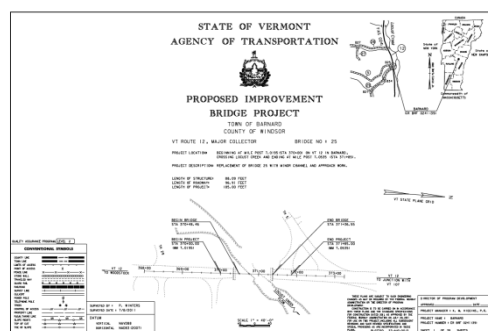
**Plymouth ER BRS 0149(5) VT100A, BR8** – The replacement structure was designed by TYLIN International. The construction contract was signed on October 3, 2012. The superstructure and both abutments are precast concrete. The abutments were precast on by the contractor and set into place. Traffic continues to be maintained on a two-way temporary bridge that was installed immediately following TS Irene. The project is currently in constructed and scheduled to be completed by October 4, 2013. Construction costs are \$1,100,000.



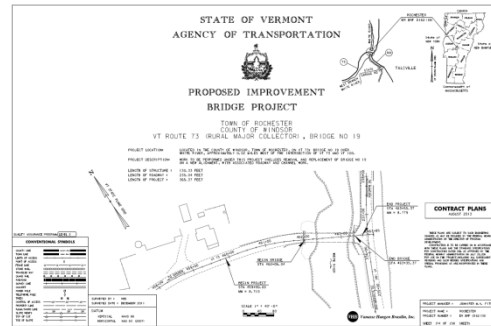
**Cavendish ER BRF 0146(13) VT131, BR1** – The replacement structure was designed by TYLIN International. The project was advertised on August 14, 2013 with the bid opening on September 6, 2013. The road will be closed for up to 35 days during construction with an incentive for early opening. The new superstructure will be precast bridge units (concrete deck on steel beams cast off site) and both abutments will be precast. The project will be constructed next summer. The construction estimate is \$1,800,000.



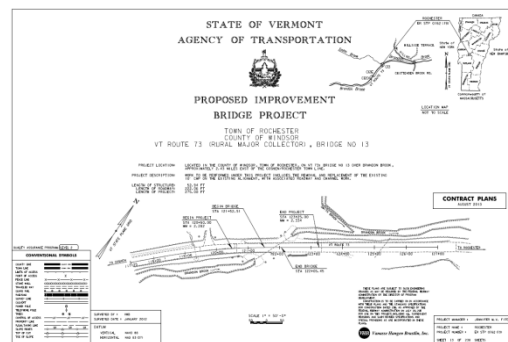
**Barnard ER BRF 0241(39) VT12, BR25** – The replacement structure was designed by Structures ABP Design Team with help from the Geotechnical section. The project will be advertised for construction on September 25, 2013 with a bid opening on October 18. The superstructure and both abutments are precast concrete elements with all details being developed in structures. The structure will be set into place in sections and tied together with a concrete closure pour and post tensioning. The road will be closed for up to 28 days during the construction of the new bridge. Incentive/disincentive is being used to keep the closure as short as possible. The project will be constructed next summer. The construction estimate is \$1,400,000.



**Rochester ER BRF 0162(18) VT73, BR19** – The replacement structure was designed by VHB. The project will be advertised for construction with three other structures being replaced along the same route within the town of Rochester on September 25, 2013 with a bid opening on October 18. The “Fast Four” will be advertised under one contract to ensure coordination and minimal impacts to the travelling public. The superstructure is a concrete deck on steel girders. The abutments will be cast in place atop steel H piles and are semi-integral with the superstructure. Traffic will be maintained on a two-way temporary bridge. The project will be constructed next summer. The construction estimate is \$3,000,000.



**Rochester ER BRF 0162(19) VT73, BR13** – The replacement structure was designed by VHB. The project will be advertised for construction with three other structures being replaced along the same route within the town of Rochester on September 25, 2013 with a bid opening on October 18. This new structure will be a precast concrete arch structure installed during a two week road closure. Bridge 13 is the second of two bridges being replaced in the “Fast Four” contract. The project will be constructed next summer. The construction estimate is \$2,400,000.



**Pittsfield ER BRF 022-1(23) VT100, BR124** – The replacement structure was designed by Structures ABP Design Team with help from the Geotechnical section. The project will be advertised for construction on October 9, 2013 with a bid opening on November 1, 2013. The superstructure and both abutments will be precast concrete with all details being developed in structures. All elements of the bridge will be cast off site and structure set into place in sections. Traffic will be maintained on a two-way temporary bridge constructed immediately following TS Irene. The project will be constructed next summer. The construction estimate is \$1,600,000.

